

December 16<sup>th</sup>, 2020

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Quality Evidence for Health System Transformation

### Agenda



- Project aims
- Methods overview
- Preliminary results in 6 countries
- Preliminary conclusions

# Project aims

1. To describe health system performance nationally and subnationally over time (pre- and post-Covid)

### 2. To assess the effect of:

- Covid intensity (number of cases and deaths, in-country and globally)
- Containment policy response (e.g. school and business closures, travel restrictions etc.)
- On health system performance
  - ullet Utilization of essential health services  $ildsymbol{\dagger}$
  - Quality of care 🚽
  - Non-Covid institutional mortality

### 11 LMICs & 2 High Income Countries



# Methods: Data Sources

Health system performance (volume of services, quality, mortality)

- DHIS2
- Other HMIS (e.g., Mexico, Chile)
- Monthly, facility-level

### Exposure data

- Covid cases and deaths: Our World in Data
- Local containment policies:
  - Oxford Coronavirus Government Response Tracker
  - Complemented by expert reviews



## Health system performance indicators

- Volume: RMNCH services, vaccines, total outpatient visits, total inpatient admissions, ER visits, diabetes consultations, hypertension, Total on ART
- **Quality of services**: % controlled BP, % controlled blood sugar, c-section rate, % ART patients with undetectable VL
- Institutional mortality (rates): maternal, newborn, stillbirths, inpatient, ER, ICU

### Methods

- Dhis2 data cleaning
  - Completeness
  - Timeliness
  - Outliers/errors
- Dashboards and policy briefs
- Modelling
  - Interrupted time series modelling
  - Pooled results across countries

### Preliminary results in 6 LMICs





Data source: Our World in Data





# Preliminary results: Ethiopia

#### First COVID-19 case:

---- March 13th, 2020



On average, "stable" trends in services; likely a combination of decrease in utilization and increase in reporting quality (new dhis2 system)

Hospitals and urban areas appear most affected



#### Downward trend in most services assessed Maternal and perinatal mortality increased considerably

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### Preliminary results: Kwazulu-Natal, South Africa

#### First COVID-19 case:

---- March 5th, 2020

#### **COVID-19 National Containment Policies**



Curfew in place

Business/Workplace re-opened

Curfew lifted



Sharp decline in April (except ART), resumption in some services, not others

Most institutional mortality increased (particularly maternal deaths)

# Preliminary results: Mexico\*

#### First COVID-19 case:

---- February 28th, 2020

#### COVID-19 Containment Policies

State of Emergency declaredState of Emergency liftedStay-at-home requirementsStay-at-home requirements liftedBusiness/Workplace closuresBusiness/Workplace re-opened



Downward trend in all services assessed, and reduction in quality ER deaths and maternal mortality increased considerably Stillbirths and newborn deaths decreased?



# **Preliminary results: Nepal**



#### First COVID-19 case:

---- January 25th, 2020

#### **COVID-19 National Containment Policies**



### Sharp decline followed by a quick resumption in services for many indicators

Institutional maternal deaths doubled; stillbirths stable

# Preliminary results: Thailand\*

#### First COVID-19 case:

---- January 22nd, 2020



Decline on all indicators assessed except ANC Institutional mortality data not available

## Preliminary conclusions

- Decline in provision of majority of services
- Maternal deaths increasing drastically in 4/5 countries with this data
  - Late arrival? decrease in quality?
- Stillbirths stable or decreased
- Urban areas and hospitals appear more affected

### Products

- Generate lessons for future health system shocks
- Identify certain containment policies that had stronger indirect effects
- Identify most affected:
  - Health services/indicators
  - Facility types
  - Regions/provinces
- Contribute to development of policies to maintain essential health services during health system shocks
- Demonstrate the importance of dhis2/routine data for health system resilience

# Thank you!

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